

CLAIMS

1. A method of performing dispersion compensation on an optical communications signal, comprising coarsely dispersion compensating the signal as an optical multiplex on a communications network, dropping the signal from the network, and applying an adjustable dispersion compensation to the dropped signal based on a measure of the error rate in the signal.
2. A method according to claim 1, wherein the adjustable dispersion compensation is applied to individual channels of the signal multiplex dropped from the network.
3. A method according to claim 1, wherein the measure of the signal error rate is used to form a feedback signal to control the adjustable dispersion compensation.
4. A method according to claim 1, 2 or 3, wherein applying the dispersion compensation based on a measure of the error rate comprises adjusting the dispersion compensation to minimise the error rate.
5. A method according to claim 1, 2 or 3, wherein the optical communications signal is forward error correction (FEC) encoded, and wherein the measure of the error rate is a bit error rate derived from a FEC decoder.
6. A method according to claim 4 or 5, comprising dithering the dispersion compensation to determine the dispersion compensation having the minimum error rate.

7. A method of performing dispersion compensation on an optical communications signal dropped from an optical communications network, comprising splitting the signal multiplex dropped from the network into a plurality of separate signal channels and performing an adjustable dispersion compensation on each channel based on a measure of the error rate in the channel.

8. Apparatus for performing dispersion compensation on an optical communications signal, comprising means for performing coarse dispersion compensation on the signal multiplex on a communications network, means for dropping the signal multiplex from the network, and means for applying an adjustable dispersion compensation to the dropped signal based on a measure of the error rate in the signal.

9. Apparatus according to claim 8, comprising means for splitting the dropped signal multiplex into a plurality of separate channels, wherein the adjustable dispersion compensation means applies an adjustable compensation to the separated channels.

10. Apparatus according to claim 9, comprising means for measuring the error rate in a channel and means for deriving and applying a control signal to adjust the dispersion compensation means from the measured error rate.

11. Apparatus according to claim 10, wherein the means for deriving and applying the control signal adjusts the dispersion compensation means to minimise the measured error rate.

12. Apparatus according to claims 10 or 11, wherein the signal carried on the network is forward error corrected (FEC) and the means for measuring the error rate comprises an FEC decoder outputting a bit error rate signal to the means for deriving and applying the control signal.

13. Apparatus according to claim 10, 11 or 12, wherein the means for deriving and applying the control signal comprises means for dithering the control signal to set the dispersion compensation means such that the measured error rate is a minimum.

14. An add/drop node for an optical communications network, comprising a splitter for dropping a signal multiplex from the network, means for separating the signal multiplex into a plurality of channels, means for measuring the error rate in a channel, and means for applying an adjustable dispersion compensation to the channel based on the error rate.